

7244

BOARD DIPLOMA EXAMINATION, (C-20)

MAY—2023

DECE - THIRD SEMESTER EXAMINATION

ELECTRONIC MEASUREMENTS AND CONSUMER GADGETS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List any three advantages of digital instruments over analog instruments.
2. Define resolution of a meter.
3. Define deflection sensitivity of CRO.
4. List the conditions for stationary waveforms in CRO.
5. List any three important applications of RF generators.
6. State the working principle of logic probe.
7. List the specifications of loudspeakers.
8. Define the terms speech, music and noise.
9. State the purpose of equalizer in audio systems.
10. State the need of satellite for TV broadcasting over wide area.

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PART—B

8×5=40

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Explain working of FET input voltmeter with a circuit diagram.

(OR)

(b) Explain working of ramp type digital voltmeter with a block diagram.

12. (a) Explain working of function generator with a block diagram.

(OR)

(b) Explain working of digital IC tester with a block diagram.

13. (a) Explain the working of dynamic microphone with its polar characteristics.

(OR)

(b) Explain the principle, construction and working of magnetic headphones.

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14. (a) Explain the working principle of digital camera with a functional block diagram.

(OR)

(b) Draw the block diagram of digital TV transmission system and explain.

15. (a) Explain the concept of HDTV and list its features.

(OR)

(b) Explain the resistive and capacitive touch screen technology.

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PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** Explain how to measure frequency and phase of a signal using Lissajous figures with an example.

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